

## Eurosprinter ES64U4

The locomotive platform for fast passenger and freight transport in Europe

www.siemens.com/mobility

**SIEMENS** 



# Cross-border

A platform concept to meet the requirements of European rail transportation



# capability

As a modern four-system locomotive, the Eurosprinter platform concept opens up new perspectives in the area of interoperable passenger and freight transportation. The locomotives can be operated in all four of the power systems common in Europe, excel with low levels of power consumption and move passenger and freight trains efficiently and reliably over millions of kilometers.

Mobility will be the primary challenge facing us in the years to come. In order to remain mobile, we need networked transportation and information systems. For only if all modes of transportation are effectively coordinated to each other and interact perfectly, will it be possible to meet the future demands for mobility. For this purpose, Siemens introduced its "Complete mobility" approach aimed at creating integrated transportation and logistics solutions for safe, cost-effective and environmentally compatible passenger and freight transport. Siemens has all the necessary means to do this – everything from infrastructure facilities for rail and road transportation to rolling stock, from airport logistics to postal automation.

A key component of "Complete mobility" involves cost-effective solutions for rail-bound transportation – whether for keeping cities and major conurbations mobile or for linking urban centers and countries.



## Towards a unified Europe

#### New standards for transport along international corridors

With its pioneering platform concept, the ES64U4 four-system locomotive ensures a seamless transport chain across borders and beyond.

- The only modern locomotive capable of speeds up to 230 km/h
- First type of locomotive for transport in Germany, Austria, the Czech Republic and Hungary
- Non-stop transportation possible from Poland to Slovenia
- Daily use in six countries with up to 11 system changes
- Fully automatic multiple unit operation, in combination with diesel locomotives as well

- Fire-extinguishing concept meets the requirements of the Kyoto protocol, has been homologated for use throughout Europe, works without residue and is activated by failsafe temperature sensors
- Transparent concept for intuitive and userfriendly man-machine-interface
- Easy retrofitting options for country packages and functions
- Investment protected thanks to retrofitting of ETCS with integrated conventional train protection systems



### Flexible and comfortable

#### ES64U4 - an all-round locomotive

Optional equipment packages that can be retrofitted enable flexible adaptation to the respective use in each case, e.g.:

- Train length counter
- Loading run
- Wash run
- Single-man brake test
- Long-distance data transmission, including GPS position-finding
- Active yaw damper
- Energy counter (AC, AC + DC)
- Train destination indicator
- Country packages:
  - Italy
  - Poland
  - Czech Republic
  - Hungary

Country homologations

9

System changeovers

11

Automatic train control systems

5



## Durability you can rely on

#### The advantages of high availability

Experience from continuous service over millions of kilometers and the modular service concept for everywhere the vehicle is used make the ES64U4 a locomotive that you can rely on completely.

- Over 20 million fleet kilometers (this corresponds to around 500 trips round the earth) for 11 international customers
- Over 99 % identical parts for all versions of the platform ensure the maximum possible synergies when it comes to spare-parts supply
- Interactive spare-parts catalog facilitates the entire ordering process
- Low life-cycle costs thanks to best-in-class maintenance intervals of 25,000 km

Fleet kilometers (as of 12/2008)

### 20 million km

Proportion of common parts

99%



#### 25,000 km Maintenance interval

This corresponds to:

• over 40 times the journey between Vienna, Prague and Dresden (610 km)



# Athletic performance

#### More power for higher efficiency

The locomotives of the Eurosprinter platform combine strength and intelligence in a sustainable manner: the peak performance levels of the traction system have positive benefits for the customer. This reduces pollution and costs as well.

- Best-in-class utilization of tractive effort enables cost-efficient driving even on topographically demanding routes
- High electric braking effort returns braking energy to the power system and thus reduces wear on the brakes
- Low energy costs thanks to the high degree of efficiency

Power rating

6,000 kW

Power booster

6,400 kW

Maximum speed

230 km/h

#### Siemens AG

Industry Sector Mobility Division Rolling Stock Werner-von-Siemens-Strasse 67 91052 Erlangen Germany

#### Siemens AG

Industry Sector Mobility Division Locomotives Munich Plant Krauss-Maffei-Strasse 2 80997 Munich Germany

www.siemens.com/mobility/ locomotives

Printed in Germany TE 084101 176777 WS 05091.0 Dispo 21715 c4bs 3924 Order No.: A19100-V600-B333-X-7600

Eurosprinter® and Eurorunner® are registered trademarks of Siemens AG.

The information in this document contains general descriptions of the technical options available, which do not have to be present in all individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

